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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,033	03/16/2004	Motohiro Hayashi	4074-11	1260

23117 7590 05/03/2007
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EXAMINER

SCHNEIDER, JOSHUA D

ART UNIT	PAPER NUMBER
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2182

MAIL DATE	DELIVERY MODE
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05/03/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/801,033	Applicant(s) HAYASHI ET AL.	
	Examiner Joshua D. Schneider	Art Unit 2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 5, 10 and 12-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-9, and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-4, 6-9, and 11, have been considered but are moot in view of the new ground(s) of rejection. Examiner apologizes for any lack of clarity in the previous rejection. Familiarity with the USB specification was improperly presumed in light of the teaching of the specification. New cites are provided below, as well as alternative rejections which present evidence contrary to the arguments made by applicant that the specification would not apply.

2. The main argument presented by Applicant is that status update information that is discovered and transmitted to a hub device is not transmitted to the host device. This is contradictory to the USB specification (page 210, last paragraph of 10.1.1, all hubs report internal status changes and their port status changes to the host). The control mechanisms then use the default pipe (and therefore the associated endpoint) to control the device (10.1.2).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4, 6-9, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by USB Specification Revision 1.1. No copy of the specification is being provided as is it widely available and USB is admitted to be well known by the Applicants.

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5. With regards to claim 1, the USB specification teaches transmitting identification information from the apparatus to be controlled to the controlling apparatus (chapters 10 and 11 generally, host to hub endpoint identification and enumeration, page 210, also pages 19-20, 4.6.1-3); and changing the identification information to be transmitted, when a specification of the apparatus to be controlled is changed (status change information transmitted through status change endpoint, page 210, last paragraph of 10.1.1).
6. With regards to claim 2, the USB specification teaches detecting a change in a specification (pages 19-20, 4.6.1-3, status detection and enumeration); and setting identification information to be transmitted, on the basis of the detected change in the specification (status change information transmitted through status change endpoint, page 210, last paragraph of 10.1.1).
7. With regards to claim 3, the USB specification teaches extracting identification information corresponding to the detected change, from the storage unit (device configuration and enumeration, pages 19-20, 4.6.1-3); and setting the extracted identification information as identification information to be transmitted (status change information transmitted through status change endpoint, page 210, last paragraph of 10.1.1).
8. With regards to claim 4, the USB specification teaches a connection unit for connecting another device (USB hub generally, Fig. 11-1); and a processor capable of performing the operations (USB hub controller, Fig. 11-1) of: detecting a change in a situation of connection of the device to the connection unit (device state events, pages 19-20, 4.6.1-3); and setting identification information to be transmitted, on the basis of the detected change in the situation of

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connection (status change information transmitted through status change endpoint, page 210, last paragraph of 10.1.1).

9. With regards to claim 6, the USB specification teaches extracting identification information corresponding to the detected change, from the storage unit (device configuration and enumeration, pages 19-20, 4.6.1-3); and setting the extracted identification information as identification information to be transmitted (status change information transmitted through status change endpoint, page 210, last paragraph of 10.1.1).

10. With regards to claim 7, the USB specification teaches an apparatus to be controlled (USB hub, Fig. 11-1) by an apparatus to which identification information for identifying the apparatus to be controlled is transmitted (USB host, Fig. 4-4); and a controlling apparatus for controlling the apparatus to be controlled on the basis of the identification information (USB host controller, Figs. 4-1 and 10-4), the apparatus to be controlled including a processor capable of performing the operations of: detecting a change in a specification (device configuration and enumeration, pages 19-20, 4.6.1-3); and setting identification information to be transmitted, on the basis of the detected change in the specification (status change information transmitted through status change endpoint, page 210, last paragraph of 10.1.1).

11. With regards to claim 8, the USB specification teaches an apparatus to be controlled (USB hub, Fig. 11-1) by an apparatus to which identification information for identifying the apparatus to be controlled is transmitted (USB host controller, Figs. 4-1 and 10-4); and a controlling apparatus for controlling the apparatus to be controlled on the basis of the identification information (USB host, Fig. 4-1), the apparatus to be controlled including: a connection unit for connecting another device (USB downstream port); and a processor capable

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of performing the operations of detecting a change in a situation of connection of the device to the connection unit (USB hub controller, Fig. 11-1); and setting identification information to be transmitted, on the basis of the detected change in the situation of connection (status change information transmitted through status change endpoint, page 210, last paragraph of 10.1.1).

12. With regards to claim 9, the USB specification teaches an apparatus to be controlled (USB hub, Fig. 11-1) by an apparatus to which identification information for identifying the apparatus to be controlled is transmitted (USB host, Fig. 4-1), and which includes: a connection unit for connecting another device (USB host interface, Figs. 4-1 and 10-4); and a processor capable of performing the operations of detecting a change in a situation of connection of the device to the connection unit (USB hub controller, Fig. 11-1); and setting identification information to be transmitted, on the basis of the detected change in the situation of connection (status change information transmitted through status change endpoint, page 210, last paragraph of 10.1.1); an attached device connected to the connection unit provided in the apparatus to be controlled (downstream, hub connected, USB device, Fig. 4-1); and a controlling apparatus for controlling the apparatus to be controlled and the attached device on the basis of the identification information (USB host controller, Figs. 4-1 and 10-4).

13. With regards to claim 11, the USB specification teaches extracting identification information corresponding to the detected change, from the storage unit (device configuration and enumeration, pages 19-20, 4.6.1-3); and setting the extracted identification information as identification information to be transmitted (status change information transmitted through status change endpoint, page 210, last paragraph of 10.1.1).

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14. Claims 1-4, 6-9, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 6,415,343 to Fensore et al.

15. With regards to claim 1, Fensore teaches transmitting identification information from the apparatus to be controlled to the controlling apparatus (column 1, lines 53-67); and changing the identification information to be transmitted, when a specification of the apparatus to be controlled is changed (column 2, lines 33-40).

16. With regards to claim 2, Fensore teaches detecting a change in a specification (column 2, lines 33-40); and setting identification information to be transmitted, on the basis of the detected change in the specification (column 2, lines 1-14).

17. With regards to claim 3, Fensore teaches extracting identification information corresponding to the detected change, from the storage unit (port status, column 2, lines 20-32); and setting the extracted identification information as identification information to be transmitted (change identified and reflected in topology, column 2, lines 20-32).

18. With regards to claim 4, Fensore teaches a connection unit for connecting another device (USB hub, Fig. 1, element 110); and a processor capable of performing the operations (USB hub controller, Fig. 1, inherent to element 110) of: detecting a change in a situation of connection of the device to the connection unit (column 2, lines 33-40); and setting identification information to be transmitted, on the basis of the detected change in the situation of connection (column 2, lines 1-14).

19. With regards to claim 6, Fensore teaches extracting identification information corresponding to the detected change, from the storage unit (port status, column 2, lines 20-32);

and setting the extracted identification information as identification information to be transmitted (change identified and reflected in topology, column 2, lines 20-32).

20. With regards to claim 7, Fensore teaches an apparatus to be controlled (USB hub, Fig. 1, element 110 or 122) by an apparatus to which identification information for identifying the apparatus to be controlled is transmitted (USB host, Fig. 1, element 100); and a controlling apparatus for controlling the apparatus to be controlled on the basis of the identification information (USB host controller, Fig. 1, element 102), the apparatus to be controlled including a processor capable of performing the operations of: detecting a change in a specification (column 1, lines 53-67); and setting identification information to be transmitted, on the basis of the detected change in the specification (column 2, lines 1-14).

21. With regards to claim 8, Fensore teaches an apparatus to be controlled (USB hub, Fig. 1, element 110 or 122) by an apparatus to which identification information for identifying the apparatus to be controlled is transmitted (USB host controller, Fig. 1, element 102); and a controlling apparatus for controlling the apparatus to be controlled on the basis of the identification information (USB host, Fig. 1, element 100), the apparatus to be controlled including: a connection unit for connecting another device (USB downstream port); and a processor capable of performing the operations of detecting a change in a situation of connection of the device to the connection unit (USB hub controller, Fig. 1, element 102); and setting identification information to be transmitted, on the basis of the detected change in the situation of connection (column 2, lines 1-14).

22. With regards to claim 9, Fensore teaches an apparatus to be controlled (USB hub, Fig. 1, element 110 or 122) by an apparatus to which identification information for identifying the

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apparatus to be controlled is transmitted (USB host, Fig. 1, element 100), and which includes: a connection unit for connecting another device (USB host interface, Fig. 1, connection between elements 102 and 110); and a processor capable of performing the operations of detecting a change in a situation of connection of the device to the connection unit (USB hub controller, Fig. 1, element 102); and setting identification information to be transmitted, on the basis of the detected change in the situation of connection (column 2, lines 1-14); an attached device connected to the connection unit provided in the apparatus to be controlled (downstream, hub connected, USB device, Fig. 1, element 124, 126, 132, 134, or 140); and a controlling apparatus for controlling the apparatus to be controlled and the attached device on the basis of the identification information (USB host controller, Fig. 1, element 102).

23. With regards to claim 11, Fensore teaches extracting identification information corresponding to the detected change, from the storage unit (port status, column 2, lines 20-32); and setting the extracted identification information as identification information to be transmitted (change identified and reflected in topology, column 2, lines 20-32).

Conclusion

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent Application Publication 2003/0016419 to Palmer teaches transmission of identification strings from a controlling device to a device to be controlled after device upgrades. U.S. Patent 5,933,611 to Shakkarwar teaches that a root hub of the host determines the depth of the devices in order to properly enumerate and initialize the devices. U.S. Patent Application Publication 2004/0205279 to Ohnishi teaches that the host device is notified by the hub of status changes. U.S. Patent Application Publication 2002/0011516 to Lee teaches a USB device that

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sends change of specification information based on devices changing the hub specification. U.S. Patent Application Publication 2002/0001104 to Shima teaches that a controlled device notifies the host of changes to job management information.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua D. Schneider whose telephone number is (571) 272-4158. The examiner can normally be reached on M, T, Th, and F, 9-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JDS



KIM HUYNH
SUPERVISORY PATENT EXAMINER

4/30/07